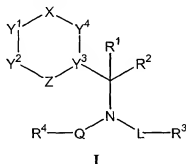


WHAT IS CLAIMED IS:

1. A compound having the formula (I):



wherein

- X is a member selected from the group consisting of a bond, -C(O)-, -C(R<sup>5</sup>)(R<sup>6</sup>)-, -C(R<sup>5</sup>)=, -S(O)-, -S(O)<sub>2</sub>- and -N=;
- Z is a member selected from the group consisting of a bond, -N=, -O-, -S-, -N(R<sup>17</sup>)- and -C(R<sup>7</sup>)=, with the proviso that X and Z are not both a bond;
- L is a member selected from the group consisting of a bond, C(O)-(C<sub>1</sub>-C<sub>8</sub>)alkylene, (C<sub>1</sub>-C<sub>8</sub>)alkylene and (C<sub>2</sub>-C<sub>8</sub>)heteroalkylene;
- Q is a member selected from the group consisting of a bond, (C<sub>1</sub>-C<sub>8</sub>)alkylene, (C<sub>2</sub>-C<sub>8</sub>)heteroalkylene, -C(O)-, -OC(O)-, -N(R<sup>8</sup>)C(O)-, -CH<sub>2</sub>CO-, -CH<sub>2</sub>SO- and -CH<sub>2</sub>SO<sub>2</sub>-;
- optionally L and Q can be linked together to form a 5- or 6-membered heterocyclic group having from 1 to 3 heteroatoms;
- R<sup>1</sup> and R<sup>2</sup> are members independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl and heteroaryl, or optionally are combined to form a 3 to 8-membered ring having from 0 to 2 heteroatoms as ring vertices;
- optionally R<sup>2</sup> and L can be linked together to form a 5- or 6-membered heterocyclic group having from 1 to 4 heteroatoms;
- R<sup>3</sup> is a member selected from the group consisting of hydroxy, (C<sub>1</sub>-C<sub>8</sub>)alkoxy, amino, (C<sub>1</sub>-C<sub>8</sub>)alkylamino, di(C<sub>1</sub>-C<sub>8</sub>)alkylamino, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, (C<sub>3</sub>-C<sub>9</sub>)heterocyclyl, (C<sub>1</sub>-C<sub>8</sub>)acylamino, amidino, guanidino, ureido, cyano, heteroaryl, -CONR<sup>9</sup>R<sup>10</sup> and -CO<sub>2</sub>R<sup>11</sup>;
- R<sup>4</sup> is a member selected from the group consisting of (C<sub>1</sub>-C<sub>20</sub>)alkyl, (C<sub>2</sub>-C<sub>20</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>6</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>6</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>6</sub>)heteroalkyl;
- R<sup>5</sup> and R<sup>6</sup> are each members independently selected from the group

29 consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl, or optionally R<sup>5</sup>  
 30 and R<sup>6</sup> are combined to form a 3- to 7-membered ring;  
 31 R<sup>7</sup> and R<sup>8</sup> are each members independently selected from the group  
 32 consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl,  
 33 each R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> is independently selected from the group consisting  
 34 of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl,  
 35 heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl;  
 36 Y<sup>1</sup> and Y<sup>2</sup> are each members independently selected from the group  
 37 consisting of -C(R<sup>12</sup>)=, -N=, -O-, -S- and -N(R<sup>13</sup>)-;  
 38 Y<sup>3</sup> is a member selected from the group consisting of N and C wherein the  
 39 carbon atom shares a double bond with either Z or Y<sup>4</sup>; and  
 40 Y<sup>4</sup> is a member selected from the group consisting of -N(R<sup>14</sup>)-, -C(R<sup>14</sup>)=,  
 41 -N= and -N(R<sup>14</sup>)-C(R<sup>15</sup>)(R<sup>16</sup>)-, wherein  
 42 each R<sup>12</sup> is a member independently selected from the group consisting of  
 43 H, halogen, hydroxy, amino, alkylamino, dialkylamino, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl,  
 44 heteroaryl and aryl, or optionally when Y<sup>1</sup> and Y<sup>2</sup> are both -C(R<sup>12</sup>)= the two R<sup>12</sup> groups  
 45 can be combined to form a substituted or unsubstituted 5- to 6-membered cycloalkyl,  
 46 heterocycloalkyl, aryl or heteroaryl ring; or optionally when Y<sup>1</sup> is -C(R<sup>12</sup>)= and X is -  
 47 C(R<sup>5</sup>)= or -C(R<sup>5</sup>)(R<sup>6</sup>)-, R<sup>12</sup> and R<sup>5</sup> can be combined to form a substituted or unsubstituted  
 48 5- to 6-membered cycloalkyl, heterocycloalkyl, aryl or heteroaryl ring;  
 49 R<sup>13</sup> is a member selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl,  
 50 (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl,  
 51 aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl;  
 52 R<sup>14</sup> is a member selected from the group consisting of (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-  
 53 C<sub>8</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl, aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl(C<sub>1</sub>-C<sub>8</sub>)alkyl,  
 54 heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl;  
 55 R<sup>15</sup> and R<sup>16</sup> are each members independently selected from the group  
 56 consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl and (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl; and  
 57 R<sup>17</sup> is a member selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl,  
 58 (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl,  
 59 aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, or optionally when Y<sup>2</sup> is -C(R<sup>12</sup>)= or -  
 60 N(R<sup>13</sup>)-, R<sup>17</sup> can be combined with R<sup>12</sup> or R<sup>13</sup> to form a substituted or unsubstituted 5- to  
 61 6-membered cycloalkyl, heterocycloalkyl, aryl or heteroaryl ring;  
 62 with the proviso that when the Y<sup>3</sup>-containing ring system is a

63 quinazolinone or quinolinone ring system, and  $R^4$ -Q- is substituted or unsubstituted ( $C_5$ -  
64  $C_{15}$ )alkyl, then  $R^3$ -L- is other than substituted or unsubstituted ( $C_2$ - $C_8$ )alkylene or a  
65 substituted or unsubstituted ( $C_2$ - $C_8$ )heteroalkylene attached to  $-NR'R''$ , wherein  $R'$  and  
66  $R''$  are independently selected from the group consisting of hydrogen and ( $C_1$ - $C_8$ )alkyl, or  
67 optionally are combined with the nitrogen atom to which each is attached to form a 5-, 6-  
68 or 7-membered ring.

1                    2. A compound of Claim 1, wherein  $Y^4$  is  $-N(R^{14})-$  wherein  $R^{14}$  is  
2 selected from the group consisting of aryl and heteroaryl.

1                    3. A compound of Claim 1, wherein X is  $-C(O)-$

1                    4. A compound of Claim 1, wherein Z is  $-N=$ .

1                    5. A compound of Claim 1, wherein  $Y^1$  and  $Y^2$  are each  $-C(R^{12})=$   
2 wherein the two  $R^{12}$  groups are combined to form a fused 6-membered aryl or heteroaryl  
3 ring.

1                    6. A compound of Claim 1, wherein X is  $-C(O)-$ ; Z is  $-N=$ ;  $Y^3$  is C; and  
2  $Y^1$  and  $Y^2$  are each  $-C(R^{12})=$ .

1                    7. A compound of Claim 6, wherein the two  $R^{12}$  groups are combined to  
2 form a fused 6-membered substituted or unsubstituted aryl or heteroaryl ring.

1                    8. A compound of Claim 6, wherein  $Y^4$  is  $-N(R^{14})-$ .

1                    9. A compound of Claim 6, wherein  $Y^4$  is  $-C(R^{14})=$ .

1                    10. A compound of Claim 7, wherein  $Y^4$  is  $-N(R^{14})-$ .

1                    11. A compound of Claim 7, wherein  $Y^4$  is  $-C(R^{14})=$ .

1                    12. A compound of Claim 1, wherein L is ( $C_1$ - $C_8$ )alkylene.

1                    13. A compound of Claim 1, wherein Q is  $-C(O)-$ .

1                    14. A compound of Claim 1, wherein  $R^4$  is selected from the group  
2 consisting of ( $C_5$ - $C_{15}$ )alkyl, substituted or unsubstituted phenyl and biphenyl.

1                   15. A compound of Claim 1, wherein R<sup>3</sup> is selected from the group  
2 consisting of (C<sub>1</sub>-C<sub>8</sub>)alkoxy, (C<sub>1</sub>-C<sub>8</sub>)alkylamino, di(C<sub>1</sub>-C<sub>8</sub>)alkylamino, (C<sub>2</sub>-  
3 C<sub>8</sub>)heteroalkyl, (C<sub>3</sub>-C<sub>9</sub>)heterocyclyl, (C<sub>1</sub>-C<sub>8</sub>)acylamino, cyano, heteroaryl, -CONR<sup>9</sup>R<sup>10</sup>  
4 and -CO<sub>2</sub>R<sup>11</sup>.

1                   16. A compound of Claim 1, wherein R<sup>1</sup> and R<sup>2</sup> are independently selected  
2 from the group consisting of H and (C<sub>1</sub>-C<sub>4</sub>)alkyl.

1                   17. A compound of Claim 1, wherein Y<sup>3</sup> is C and the carbon atom shares a  
2 double bond with Z.

1                   18. A compound of Claim 1, wherein X is -C(R<sup>5</sup>)(R<sup>6</sup>)-; Y<sup>4</sup> is -N(R<sup>14</sup>)-,  
2 wherein R<sup>14</sup> is substituted or unsubstituted aryl or heteroaryl; Y<sup>3</sup> is C; Z is -N=; and Y<sup>1</sup>  
3 and Y<sup>2</sup> are each -C(R<sup>12</sup>)=.

1                   19. A compound of Claim 18, wherein X is -CH<sub>2</sub>- and the R<sup>12</sup> groups are  
2 combined to form a substituted or unsubstituted aryl or heteroaryl ring.

1                   20. A compound of Claim 1, wherein X is -C(R<sup>5</sup>)=; Y<sup>4</sup> is -C(R<sup>14</sup>)=,  
2 wherein R<sup>14</sup> is substituted or unsubstituted aryl or heteroaryl; Y<sup>3</sup> is C; Z is -N=; and Y<sup>1</sup>  
3 and Y<sup>2</sup> are each -C(R<sup>12</sup>)=.

1                   21. A compound of Claim 20, wherein R<sup>1</sup> is H.

1                   22. A compound of Claim 1, wherein X is a bond; Y<sup>4</sup> is -N(R<sup>14</sup>)-, wherein  
2 R<sup>14</sup> is substituted or unsubstituted aryl or heteroaryl; Y<sup>3</sup> is C; Z is -N=; and Y<sup>1</sup> and Y<sup>2</sup> are  
3 each -C(R<sup>12</sup>)=.

1                   23. A compound of Claim 22, wherein the R<sup>12</sup> groups are combined to  
2 form a substituted or unsubstituted aryl or heteroaryl ring.

1                   24. A compound of Claim 22, wherein R<sup>1</sup> is H.

1                   25. A compound of Claim 1, wherein X is -C(R<sup>5</sup>)=; Y<sup>4</sup> is -C(R<sup>14</sup>)=,  
2 wherein R<sup>14</sup> is substituted or unsubstituted aryl or heteroaryl; Y<sup>3</sup> is C; Z is -C(R<sup>7</sup>)=; and  
3 Y<sup>1</sup> and Y<sup>2</sup> are each -C(R<sup>12</sup>)=.

1                   26. A compound of Claim 25, wherein  $R^5$  and  $R^{12}$  are combined to form a  
2 5- or 6-membered substituted or unsubstituted aryl or heteroaryl ring.

1                   27. A compound of Claim 25, wherein  $R^1$  is H.

1                   28. A compound of Claim 1, wherein X is a bond; Z is  $-N=$  or  $-N(R^{17})-$ ;  
2  $Y^4$  is  $-C(R^{14})=$ , wherein  $R^{14}$  is substituted or unsubstituted aryl or heteroaryl;  $Y^1$  is  
3 selected from the group consisting of  $-O-$ ,  $-S-$  and  $-N(R^{13})-$ ; and  $Y^2$  is  $-C(R^{12})=$ .

1                   29. A compound of Claim 28, wherein  $Y^1$  is  $-O-$  and Z is  $-N=$ .

1                   30. A compound of Claim 28, wherein  $Y^1$  is  $-S-$  and Z is  $-N=$ .

1                   31. A compound of Claim 28, wherein  $Y^1$  is  $-N(R^{13})-$  and Z is  $-N=$ .

1                   32. A compound of Claim 1, wherein X is  $-SO_2-$ ;  $Y^4$  is  $-N(R^{14})=$ , wherein  
2  $R^{14}$  is substituted or unsubstituted aryl or heteroaryl;  $Y^3$  is C; Z is  $-N=$  or  $-C(R^7)=$ ; and  $Y^1$   
3 and  $Y^2$  are each  $-C(R^{12})=$ .

1                   33. A compound of Claim 32, wherein  $R^1$  is H.

1                   34. A compound of Claim 1, wherein X is a bond; Z is  $-O-$ ,  $-S-$  or  
2  $-N(R^{17})-$ ;  $Y^1$  is  $-N=$  or  $-N(R^{13})-$ ;  $Y^2$  is  $-C(R^{12})=$ ; and  $Y^4$  is  $-C(R^{14})=$  wherein  $R^{14}$  is  
3 substituted or unsubstituted aryl or heteroaryl.

1                   35. A compound of Claim 34, wherein  $Y^1$  is  $-N=$  and Z is  $-O-$ .

1                   36. A compound of Claim 34, wherein  $Y^1$  is  $-N=$  and Z is  $-S-$ .

1                   37. A compound of Claim 34, wherein Z is  $-N(R^{17})-$ .

1                   38. A compound of Claim 34, wherein  $R^1$  is H.

1                   39. A compound of Claim 1, wherein X is a bond;  $Y^1$  is  $-N(R^{13})-$  or  $=N-$ ;  
2  $Y^2$  is  $-C(R^{12})=$ ;  $Y^3$  is C;  $Y^4$  is  $-C(R^{14})=$  wherein  $R^{14}$  is substituted or unsubstituted aryl or  
3 heteroaryl; and Z is  $-N(R^{17})-$  or  $=N-$ , with the proviso that  $Y^1$  and Z are not both  $=N-$ .

1                   40. A compound of Claim 1, wherein X is a bond;  $Y^1$  and  $Y^2$  are each  
2 independently  $-C(R^{12})=$ ;  $Y^3$  is C;  $Y^4$  is  $-C(R^{14})=$  wherein  $R^{14}$  is substituted or

3 unsubstituted aryl or heteroaryl; and Z is  $-N(R^{17})-$ , O or S.

1                    41. A compound of Claim 40, wherein the two  $R^{12}$  groups are combined to  
2 form a fused 5- or 6-membered substituted or unsubstituted aryl or heteroaryl ring.

1                    42. A compound of Claim 1, wherein X is  $-C(O)-$ ;  $Y^1$  is  $-N(R^{13})-$ ;  $Y^2$  is  
2  $-N=$ ;  $Y^3$  is C;  $Y^4$  is  $-N(R^{14})-$  wherein  $R^{14}$  is substituted or unsubstituted aryl or heteroaryl;  
3 and Z is a bond.

1                    43. A compound of Claim 42, wherein  $R^1$  is H.

1                    44. A compound of Claim 1, wherein X is  $-C(O)-$ ; Z is  $-N(R^{17})-$  wherein  
2  $R^{17}$  is substituted or unsubstituted aryl or heteroaryl;  $Y^1$  and  $Y^2$  are each independently  
3  $-C(R^{12})=$ ;  $Y^3$  is C; and  $Y^4$  is  $-N=$ .

1                    45. A compound of Claim 44, wherein  $R^1$  is H.

1                    46. A compound of Claim 1, wherein X and Z are  $-N=$ ,  $Y^1$  and  $Y^2$  are each  
2 independently  $-C(R^{12})=$ ;  $Y^3$  is C; and  $Y^4$  is  $-C(R^{14})=$  wherein  $R^{14}$  is a substituted or  
3 unsubstituted aryl or heteroaryl group.

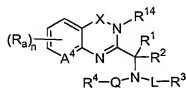
1                    47. A compound of Claim 46, wherein  $R^1$  is H.

1                    48. A compound of Claim 1, wherein X is  $-C(O)-$ ;  $Y^4$  is  
2  $-N(R^{14})-C(R^5)(R^6)-$ ; wherein  $R^{14}$  is substituted or unsubstituted aryl or heteroaryl;  $Y^1$  and  
3  $Y^2$  are each independently  $-C(R^{12})=$ ;  $Y^3$  is C; and Z is  $-N=$ .

1                    49. A compound of Claim 48, wherein  $R^1$  is H.

1                    50. A compound of Claim 1, wherein the  $Y^3$ -containing ring system is  
2 selected from the group consisting of quinoline, quinazoline, naphthalene, quinolinone,  
3 quinazolinone, triazolinone, pyrimidin-4-one, benzimidazole, thiazole, imidazole,  
4 pyridine, pyrazine and benzodiazepine.

51. A compound of Claim 1, having the formula (III):



III

wherein

A<sup>4</sup> is C or N;

X is -CO-, -CH<sub>2</sub>- or a bond;

R<sup>1</sup> and R<sup>2</sup> are each members independently selected from the group consisting of H and (C<sub>1</sub>-C<sub>4</sub>)alkyl;

R<sup>14</sup> is a substituted or unsubstituted member selected from the group consisting of phenyl, pyridyl, thiazolyl, thienyl and pyrimidinyl;

Q is -CO-;

L is (C<sub>1</sub>-C<sub>8</sub>)alkylene;

the subscript n is an integer of from 0 to 4; and

each R<sub>a</sub> is independently selected from the group consisting of halogen, -OR', -OC(O)R', -NR'R'', -SR', -R', -CN, -NO<sub>2</sub>, -CO<sub>2</sub>R', -CONR'R'', -C(O)R', -OC(O)NR'R'', -NR''C(O)R', -NR''C(O)<sub>2</sub>R', -NR'-C(O)NR''R'', -NH-C(NH<sub>2</sub>)=NH, -NR'C(NH<sub>2</sub>)=NH, -NH-C(NH<sub>2</sub>)=NR', -S(O)R', -S(O)<sub>2</sub>R', -S(O)<sub>2</sub>NR'R'', -N<sub>3</sub>, -CH(Ph)<sub>2</sub>, perfluoro(C<sub>1</sub>-C<sub>4</sub>)alkoxy, and perfluoro(C<sub>1</sub>-C<sub>4</sub>)alkyl, wherein R', R'' and R''' are each independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, unsubstituted aryl, unsubstituted heteroaryl, (unsubstituted aryl)-(C<sub>1</sub>-C<sub>4</sub>)alkyl, and (unsubstituted aryl)oxy-(C<sub>1</sub>-C<sub>4</sub>)alkyl.

52. A compound of Claim 51, wherein X is -C(O)-.

53. A compound of Claim 51, wherein X is -CH<sub>2</sub>-.

54. A compound of Claim 51, wherein X is a bond.

55. A compound of Claim 51, wherein R<sup>4</sup> is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C<sub>1</sub>-C<sub>4</sub>)alkyl, halo(C<sub>1</sub>-C<sub>4</sub>)alkoxy, cyano, nitro, and phenyl.

56. A compound of Claim 51, wherein  $R^{14}$  is selected from the group consisting of substituted phenyl, substituted pyridyl, substituted thiazolyl and substituted thienyl, wherein the substituents are selected from the group consisting of cyano, halogen,  $(C_1-C_8)$ alkoxy,  $(C_1-C_8)$ alkyl,  $(C_2-C_8)$ heteroalkyl,  $CONH_2$ , methylenedioxy and ethylenedioxy.

57. A compound of Claim 51, wherein  $R^{14}$  is substituted phenyl, wherein the substituents are selected from the group consisting of cyano, halogen,  $(C_1-C_8)$ alkoxy,  $(C_1-C_8)$ alkyl,  $(C_2-C_8)$ heteroalkyl,  $CONH_2$ , methylenedioxy and ethylenedioxy.

58. A compound of Claim 51, wherein  $R^4$  is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo $(C_1-C_4)$ alkyl, halo $(C_1-C_4)$ alkoxy, cyano, nitro and phenyl, and  $R^{14}$  is substituted phenyl, wherein the substituents are selected from the group consisting of cyano, halogen,  $(C_1-C_8)$ alkoxy,  $(C_1-C_8)$ alkyl,  $(C_2-C_8)$ heteroalkyl,  $CONH_2$ , methylenedioxy and ethylenedioxy.

59. A compound of Claim 51, wherein  $R^1$  is selected from the group consisting of methyl, ethyl and propyl, and  $R^2$  is hydrogen.

60. A compound of Claim 51, wherein  $R^1$  and  $R^2$  are each methyl.

61. A compound of Claim 51, wherein  $R^3$  is selected from the group consisting of  $(C_1-C_8)$ alkoxy, amino,  $(C_1-C_8)$ alkylamino, di $(C_1-C_8)$ alkylamino,  $(C_2-C_8)$ heteroalkyl,  $(C_3-C_9)$ heterocyclyl and heteroaryl.

62. A compound of Claim 51, wherein  $R^3$  is selected from the group consisting of substituted or unsubstituted pyridyl and substituted or unsubstituted imidazolyl.

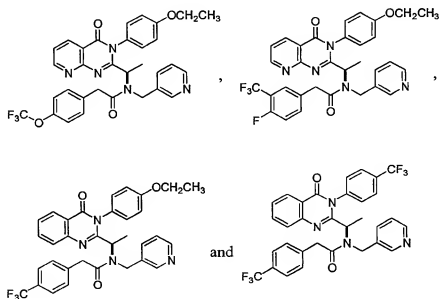
63. A compound of Claim 51, wherein L is  $(C_1-C_4)$ alkylene.

64. A compound of Claim 51, wherein X is  $-CO-$ ;  $R^1$  and  $R^2$  are each independently selected from the group consisting of H, methyl and ethyl;  $R^{14}$  is phenyl; ; L is methylene, ethylene or propylene,  $R^3$  is selected from the group consisting of substituted or unsubstituted pyridyl and substituted or unsubstituted imidazolyl;  $R^4$  is substituted or unsubstituted benzyl, wherein said substituents are selected from the group

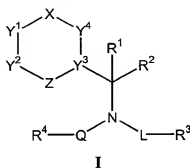


consisting of halogen, halo(C<sub>1</sub>-C<sub>4</sub>)alkyl, halo(C<sub>1</sub>-C<sub>4</sub>)alkoxy, cyano, nitro, and phenyl; and each R<sub>a</sub> is selected from the group consisting of halogen, -OR', -OC(O)R', -NR'R'', -SR', -R', -CN, -NO<sub>2</sub>, -CO<sub>2</sub>R', -CONR'R'', -C(O)R', -NR''C(O)R', -NR'-C(O)NR'''R''', perfluoro(C<sub>1</sub>-C<sub>4</sub>)alkoxy, and perfluoro(C<sub>1</sub>-C<sub>4</sub>)alkyl, wherein R', R'' and R''' are each independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, unsubstituted aryl, unsubstituted heteroaryl, (unsubstituted aryl)-(C<sub>1</sub>-C<sub>4</sub>)alkyl, and (unsubstituted aryl)oxy-(C<sub>1</sub>-C<sub>4</sub>)alkyl.

**65.** A compound of Claim 51, wherein said compound is selected from the group consisting of:



**66.** A pharmaceutical composition comprising a pharmaceutically acceptable carrier or excipient and a compound having the formula (I):



wherein

X is a member selected from the group consisting of a bond, -C(O)-, -C(R<sup>5</sup>)(R<sup>6</sup>)-, -C(R<sup>5</sup>)=, -S(O)-, -S(O)<sub>2</sub>- and -N=;

Z is a member selected from the group consisting of a bond,  $-N=$ ,  $-O-$ ,  $-S-$ ,  $-N(R^{17})-$  and  $-C(R^7)=$ , with the proviso that X and Z are not both a bond;

L is a member selected from the group consisting of a bond,  $C(O)-(C_1-C_8)$ alkylene,  $(C_1-C_8)$ alkylene and  $(C_2-C_8)$ heteroalkylene;

Q is a member selected from the group consisting of a bond,  $(C_1-C_8)$ alkylene,  $(C_2-C_8)$ heteroalkylene,  $-C(O)-$ ,  $-OC(O)-$ ,  $-N(R^8)C(O)-$ ,  $-CH_2CO-$ ,  $-CH_2SO-$  and  $-CH_2SO_2-$ ;

optionally L and Q can be linked together to form a 5- or 6-membered heterocyclic group having from 1 to 3 heteroatoms;

$R^1$  and  $R^2$  are members independently selected from the group consisting of H,  $(C_1-C_8)$ alkyl,  $(C_2-C_8)$ heteroalkyl, aryl and heteroaryl, or optionally are combined to form a 3 to 8-membered ring having from 0 to 2 heteroatoms as ring vertices;

optionally  $R^2$  and L can be linked together to form a 5- or 6-membered heterocyclic group having from 1 to 4 heteroatoms;

$R^3$  is a member selected from the group consisting of hydroxy,  $(C_1-C_8)$ alkoxy, amino,  $(C_1-C_8)$ alkylamino, di $(C_1-C_8)$ alkylamino,  $(C_2-C_8)$ heteroalkyl,  $(C_3-C_9)$ heterocyclyl,  $(C_1-C_8)$ acylamino, amidino, guanidino, ureido, cyano, heteroaryl,  $-CONR^9R^{10}$  and  $-CO_2R^{11}$ ;

$R^4$  is a member selected from the group consisting of  $(C_1-C_{20})$ alkyl,  $(C_2-C_{20})$ heteroalkyl, heteroaryl, aryl, heteroaryl $(C_1-C_6)$ alkyl, heteroaryl $(C_2-C_6)$ heteroalkyl, aryl $(C_1-C_6)$ alkyl and aryl $(C_2-C_6)$ heteroalkyl;

$R^5$  and  $R^6$  are each members independently selected from the group consisting of H,  $(C_1-C_8)$ alkyl,  $(C_2-C_8)$ heteroalkyl, heteroaryl and aryl, or optionally  $R^5$  and  $R^6$  are combined to form a 3- to 7-membered ring;

$R^7$  and  $R^8$  are each members independently selected from the group consisting of H,  $(C_1-C_8)$ alkyl,  $(C_2-C_8)$ heteroalkyl, heteroaryl and aryl,

each  $R^9$ ,  $R^{10}$  and  $R^{11}$  is independently selected from the group consisting of H,  $(C_1-C_8)$ alkyl,  $(C_2-C_8)$ heteroalkyl, heteroaryl, aryl, heteroaryl $(C_1-C_6)$ alkyl, heteroaryl $(C_2-C_8)$ heteroalkyl, aryl $(C_1-C_8)$ alkyl and aryl $(C_2-C_8)$ heteroalkyl;

$Y^1$  and  $Y^2$  are each members independently selected from the group consisting of  $-C(R^{12})=$ ,  $-N=$ ,  $-O-$ ,  $-S-$  and  $-N(R^{13})-$ ;

$Y^3$  is a member selected from the group consisting of N and C wherein the carbon atom shares a double bond with either Z or  $Y^4$ ; and

$Y^4$  is a member selected from the group consisting of  $-N(R^{14})-$ ,  $-C(R^{14})=$ ,

-N= and -N(R<sup>14</sup>)-C(R<sup>15</sup>)(R<sup>16</sup>)-, wherein

each R<sup>12</sup> is a member independently selected from the group consisting of H, halogen, hydroxy, amino, alkylamino, dialkylamino, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl, or optionally when Y<sup>1</sup> and Y<sup>2</sup> are both -C(R<sup>12</sup>)= the two R<sup>12</sup> groups can be combined to form a substituted or unsubstituted 5- to 6-membered cycloalkyl, heterocycloalkyl, aryl or heteroaryl ring; or optionally when Y<sup>1</sup> is -C(R<sup>12</sup>)= and X is -C(R<sup>5</sup>)= or -C(R<sup>5</sup>)(R<sup>6</sup>)-, R<sup>12</sup> and R<sup>5</sup> can be combined to form a substituted or unsubstituted 5- to 6-membered cycloalkyl, heterocycloalkyl, aryl or heteroaryl ring;

R<sup>13</sup> is a member selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl;

R<sup>14</sup> is a member selected from the group consisting of (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl, aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl(C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl;

R<sup>15</sup> and R<sup>16</sup> are each members independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl and (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl; and

R<sup>17</sup> is a member selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, or optionally when Y<sup>2</sup> is -C(R<sup>12</sup>)= or -N(R<sup>13</sup>)-, R<sup>17</sup> can be combined with R<sup>12</sup> or R<sup>13</sup> to form a substituted or unsubstituted 5- to 6-membered cycloalkyl, heterocycloalkyl, aryl or heteroaryl ring;

with the proviso that when the Y<sup>3</sup>-containing ring system is a quinazolinone or quinolinone ring system, and R<sup>4</sup>-Q- is substituted or unsubstituted (C<sub>5</sub>-C<sub>15</sub>)alkyl, then R<sup>3</sup>-L- is other than substituted or unsubstituted (C<sub>2</sub>-C<sub>8</sub>)alkylene or a substituted or unsubstituted (C<sub>2</sub>-C<sub>8</sub>)heteroalkylene attached to -NR'R'', wherein R' and R'' are independently selected from the group consisting of hydrogen and (C<sub>1</sub>-C<sub>8</sub>)alkyl, or optionally are combined with the nitrogen atom to which each is attached to form a 5-, 6- or 7-membered ring.

**67.** A composition of Claim 66, wherein Y<sup>4</sup> is -N(R<sup>14</sup>)- wherein R<sup>14</sup> is selected from the group consisting of aryl and heteroaryl.

**68.** A composition of Claim 66, wherein X is -C(O)-.

**69.** A composition of Claim 66, wherein Z is -N=.

70. A composition of Claim 66, wherein  $Y^1$  and  $Y^2$  are each  $-C(R^{12})=$  wherein the two  $R^{12}$  groups are combined to form a fused 6-membered aryl or heteroaryl ring.

71. A composition of Claim 66, wherein X is  $-C(O)-$ ; Z is  $-N=$ ;  $Y^3$  is C; and  $Y^1$  and  $Y^2$  are each  $-C(R^{12})=$  wherein the two  $R^{12}$  groups are combined to form a fused 6-membered substituted or unsubstituted aryl or heteroaryl ring.

72. A composition of Claim 66, wherein L is  $(C_1-C_8)$ alkylene.

73. A composition of Claim 66, wherein Q is  $-C(O)-$ .

74. A composition of Claim 66, wherein  $R^4$  is selected from the group consisting of  $(C_3-C_{15})$ alkyl, substituted or unsubstituted phenyl and biphenyl.

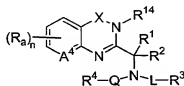
75. A composition of Claim 66, wherein  $R^3$  is selected from the group consisting of  $(C_1-C_8)$ alkoxy,  $(C_1-C_8)$ alkylamino, di $(C_1-C_8)$ alkylamino,  $(C_2-C_8)$ heteroalkyl,  $(C_3-C_9)$ heterocyclyl,  $(C_1-C_8)$ acylamino, cyano, heteroaryl,  $-CONR^9R^{10}$  and  $-CO_2R^{11}$ .

76. A composition of Claim 66, wherein  $R^1$  and  $R^2$  are independently selected from the group consisting of H and  $(C_1-C_4)$ alkyl.

77. A composition of Claim 66, wherein  $Y^3$  is C and the carbon atom shares a double bond with Z.

78. A composition of Claim 66, wherein the  $Y^3$ -containing ring system is selected from the group consisting of quinoline, quinazoline, naphthalene, quinolinone, quinazolinone, triazolinone, pyrimidin-4-one, benzimidazole, thiazole, imidazole, pyridine, pyrazine and benzodiazepine.

79. A composition of Claim 66, wherein the compound has the formula (III):



### III

wherein

A<sup>4</sup> is C or N;

X is -CO-, -CH<sub>2</sub>- or a bond;

R<sup>1</sup> and R<sup>2</sup> are each members independently selected from the group consisting of H and (C<sub>1</sub>-C<sub>4</sub>)alkyl;

R<sup>14</sup> is a substituted or unsubstituted member selected from the group consisting of phenyl, pyridyl, thiazolyl, thienyl and pyrimidinyl;

Q is -CO-;

L is (C<sub>1</sub>-C<sub>8</sub>)alkylene;

the subscript n is an integer of from 0 to 4; and

each R<sub>a</sub> is independently selected from the group consisting of halogen, -OR', -OC(O)R', -NR'R'', -SR', -R', -CN, -NO<sub>2</sub>, -CO<sub>2</sub>R', -CONR'R'', -C(O)R', -OC(O)NR'R'', -NR'C(O)R', -NR'C(O)<sub>2</sub>R', -NR'C(O)NR'R''', -NH-C(NH<sub>2</sub>)=NH, -NR'C(NH<sub>2</sub>)=NH, -NH-C(NH<sub>2</sub>)=NR', -S(O)R', -S(O)<sub>2</sub>R', -S(O)<sub>2</sub>NR'R'', -N<sub>3</sub>, -CH(Ph)<sub>2</sub>, perfluoro(C<sub>1</sub>-C<sub>4</sub>)alkoxy, and perfluoro(C<sub>1</sub>-C<sub>4</sub>)alkyl, wherein R', R'' and R''' are each independently selected from the group consisting of, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, unsubstituted aryl, unsubstituted heteroaryl, (unsubstituted aryl)-(C<sub>1</sub>-C<sub>4</sub>)alkyl, and (unsubstituted aryl)oxy-(C<sub>1</sub>-C<sub>4</sub>)alkyl.

**80.** A composition in accordance with Claim 79, wherein X is -C(O)-.

**81.** A composition in accordance with Claim 79, wherein X is -CH<sub>2</sub>-.

**82.** A composition in accordance with Claim 79, wherein X is a bond.

**83.** A composition in accordance with Claim 79, wherein R<sup>14</sup> is substituted or unsubstituted benzyl, wherein said substituents are selected from the group consisting of halogen, halo(C<sub>1</sub>-C<sub>4</sub>)alkyl, halo(C<sub>1</sub>-C<sub>4</sub>)alkoxy, cyano, nitro, and phenyl.

**84.** A composition in accordance with Claim 79, wherein R<sup>14</sup> is selected from the group consisting of substituted phenyl, substituted pyridyl, substituted thiazolyl and substituted thienyl, wherein the substituents are selected from the group consisting of cyano, halogen, (C<sub>1</sub>-C<sub>8</sub>)alkoxy, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, CONH<sub>2</sub>, methylenedioxy and ethylenedioxy.

1                   **85.** A composition in accordance with Claim 79, wherein R<sup>1</sup> is selected  
2 from the group consisting of methyl, ethyl and propyl, and R<sup>2</sup> is.

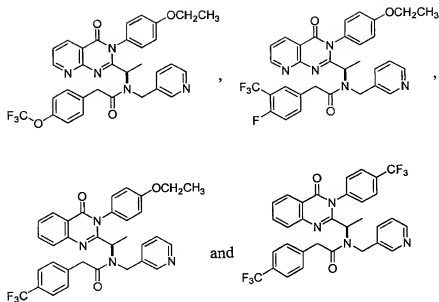
1                   **86.** A composition in accordance with Claim 79, wherein R<sup>1</sup> and R<sup>2</sup> are  
2 each methyl.

1                   **87.** A composition in accordance with Claim 79, wherein R<sup>3</sup> is selected  
2 from the group consisting of substituted or unsubstituted pyridyl and substituted or  
3 unsubstituted imidazolyl.

1                   **88.** A composition in accordance with Claim 79, wherein L is (C<sub>1</sub>-  
2 C<sub>4</sub>)alkylene.

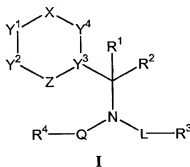
1                   **89.** A composition in accordance with Claim 79, wherein X is -CO-; R<sup>1</sup>  
2 and R<sup>2</sup> are each independently selected from the group consisting of, methyl and ethyl;  
3 R<sup>14</sup> is selected from the group consisting of substituted or unsubstituted phenyl; L is  
4 methylene, ethylene or propylene, R<sup>3</sup> is selected from the group consisting of substituted  
5 or unsubstituted pyridyl and substituted or unsubstituted imidazolyl; R<sup>4</sup> is substituted or  
6 unsubstituted benzyl, wherein said substituents are selected from the group consisting of  
7 halogen, halo(C<sub>1</sub>-C<sub>4</sub>)alkyl, halo(C<sub>1</sub>-C<sub>4</sub>)alkoxy, cyano, nitro, and phenyl; and each R<sub>a</sub> is  
8 selected from the group consisting of halogen, -OR', -OC(O)R', -NR'R'', -SR', -R', -CN,  
9 -NO<sub>2</sub>, -CO<sub>2</sub>R', -CONR'R'', -C(O)R', -NR''C(O)R', -NR'-C(O)NR''R''', perfluoro(C<sub>1</sub>-  
10 C<sub>4</sub>)alkoxy, and perfluoro(C<sub>1</sub>-C<sub>4</sub>)alkyl, wherein R', R'' and R''' are each independently  
11 selected from the group consisting of, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, unsubstituted  
12 aryl, unsubstituted heteroaryl, (unsubstituted aryl)-(C<sub>1</sub>-C<sub>4</sub>)alkyl, and (unsubstituted  
13 aryl)oxy-(C<sub>1</sub>-C<sub>4</sub>)alkyl.

1                   **90.** The composition of Claim 79, wherein said compound is:



2

1 **91.** A method of treating an inflammatory or immune condition or disease  
 2 in a subject, said method comprising administering to a subject in need of such treatment  
 3 a therapeutically effective amount of a compound having the formula (I):



4  
 5  
 6 wherein

7 X is a member selected from the group consisting of a bond, -C(O)-,  
 8 -C(R<sup>5</sup>)(R<sup>6</sup>)-, -C(R<sup>5</sup>)=, -S(O)-, -S(O)<sub>2</sub>- and -N=;

9 Z is a member selected from the group consisting of a bond, -N=, -O-, -S-,  
 10 -N(R<sup>17</sup>)- and -C(R<sup>7</sup>)=, with the proviso that X and Z are not both a bond;

11 L is a member selected from the group consisting of a bond, C(O)-(C<sub>1</sub>-  
 12 C<sub>8</sub>)alkylene, (C<sub>1</sub>-C<sub>8</sub>)alkylene and (C<sub>2</sub>-C<sub>8</sub>)heteroalkylene;

13 Q is a member selected from the group consisting of a bond, (C<sub>1</sub>-  
 14 C<sub>8</sub>)alkylene, (C<sub>2</sub>-C<sub>8</sub>)heteroalkylene, -C(O)-, -OC(O)-, -N(R<sup>8</sup>)C(O)-, -CH<sub>2</sub>CO-, -CH<sub>2</sub>SO-  
 15 and -CH<sub>2</sub>SO<sub>2</sub>-;

16 optionally L and Q can be linked together to form a 5- or 6-membered  
 17 heterocyclic group having from 1 to 3 heteroatoms;

R<sup>1</sup> and R<sup>2</sup> are members independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl and heteroaryl, or optionally are combined to form a 3 to 8-membered ring having from 0 to 2 heteroatoms as ring vertices;

optionally R<sup>2</sup> and L can be linked together to form a 5- or 6-membered heterocyclic group having from 1 to 4 heteroatoms;

R<sup>3</sup> is a member selected from the group consisting of hydroxy, (C<sub>1</sub>-C<sub>8</sub>)alkoxy, amino, (C<sub>1</sub>-C<sub>8</sub>)alkylamino, di(C<sub>1</sub>-C<sub>8</sub>)alkylamino, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, (C<sub>3</sub>-C<sub>9</sub>)heterocyclyl, (C<sub>1</sub>-C<sub>8</sub>)acylamino, amidino, guanidino, ureido, cyano, heteroaryl, -CONR<sup>9</sup>R<sup>10</sup> and -CO<sub>2</sub>R<sup>11</sup>;

R<sup>4</sup> is a member selected from the group consisting of (C<sub>1</sub>-C<sub>20</sub>)alkyl, (C<sub>2</sub>-C<sub>20</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>6</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>6</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>6</sub>)heteroalkyl;

R<sup>5</sup> and R<sup>6</sup> are each members independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl, or optionally R<sup>5</sup> and R<sup>6</sup> are combined to form a 3- to 7-membered ring;

R<sup>7</sup> and R<sup>8</sup> are each members independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl,

each R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> is independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl;

Y<sup>1</sup> and Y<sup>2</sup> are each members independently selected from the group consisting of -C(R<sup>12</sup>)=, -N=, -O-, -S- and -N(R<sup>13</sup>)-;

Y<sup>3</sup> is a member selected from the group consisting of N and C wherein the carbon atom shares a double bond with either Z or Y<sup>4</sup>; and

Y<sup>4</sup> is a member selected from the group consisting of -N(R<sup>14</sup>)-, -C(R<sup>14</sup>)=, -N= and -N(R<sup>14</sup>)-C(R<sup>15</sup>)(R<sup>16</sup>)-, wherein

each R<sup>12</sup> is a member independently selected from the group consisting of H, halogen, hydroxy, amino, alkylamino, dialkylamino, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl, or optionally when Y<sup>1</sup> and Y<sup>2</sup> are both -C(R<sup>12</sup>)= the two R<sup>12</sup> groups can be combined to form a substituted or unsubstituted 5- to 6-membered cycloalkyl, heterocycloalkyl, aryl or heteroaryl ring; or optionally when Y<sup>1</sup> is -C(R<sup>12</sup>)= and X is -C(R<sup>5</sup>)= or -C(R<sup>5</sup>)(R<sup>6</sup>)-, R<sup>12</sup> and R<sup>5</sup> can be combined to form a substituted or unsubstituted 5- to 6-membered cycloalkyl, heterocycloalkyl, aryl or heteroaryl ring;

R<sup>13</sup> is a member selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl,



(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl;

R<sup>14</sup> is a member selected from the group consisting of (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl, aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl(C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl;

R<sup>15</sup> and R<sup>16</sup> are each members independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl and (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl; and

R<sup>17</sup> is a member selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, or optionally when Y<sup>2</sup> is -C(R<sup>12</sup>)= or -N(R<sup>13</sup>)-, R<sup>17</sup> can be combined with R<sup>12</sup> or R<sup>13</sup> to form a substituted or unsubstituted 5- to 6-membered cycloalkyl, heterocycloalkyl, aryl or heteroaryl ring;

with the proviso that when the Y<sup>3</sup>-containing ring system is a quinazolinone or quinolinone ring system, and R<sup>4</sup>-Q- is substituted or unsubstituted (C<sub>5</sub>-C<sub>15</sub>)alkyl, then R<sup>3</sup>-L- is other than substituted or unsubstituted (C<sub>2</sub>-C<sub>8</sub>)alkylene or a substituted or unsubstituted (C<sub>2</sub>-C<sub>8</sub>)heteroalkylene attached to -NR'R'', wherein R' and R'' are independently selected from the group consisting of hydrogen and (C<sub>1</sub>-C<sub>8</sub>)alkyl, or optionally are combined with the nitrogen atom to which each is attached to form a 5-, 6- or 7-membered ring.

**92.** The method of Claim 91, wherein said compound is administered orally, parenterally or topically.

**93.** The method of Claim 91, wherein said compound modulates CXCR3.

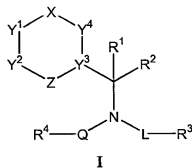
**94.** The method of Claim 91, wherein said compound is a CXCR3 antagonist.

**95.** The method of Claim 91, wherein said inflammatory or immune condition or disease is selected from the group consisting of neurodegenerative diseases, multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, atherosclerosis, encephalitis, meningitis, hepatitis, nephritis, sepsis, sarcoidosis, psoriasis, eczema, uticaria, type I diabetes, asthma, conjunctivitis, otitis, allergic rhinitis, chronic obstructive pulmonary disease, sinusitis, dermatitis, inflammatory bowel disease, ulcerative colitis, Crohn's disease, Behcet's syndrome, gout, cancer, viral infections, bacterial infections,

8 organ transplant conditions and skin transplant conditions.

1                    96. The method of Claim 91, wherein said compound is administered in  
2 combination with a second therapeutic agent, wherein said second therapeutic agent is  
3 useful for treating or preventing neurodegenerative diseases, multiple sclerosis, systemic  
4 lupus erythematosus, rheumatoid arthritis, atherosclerosis, encephalitis, meningitis,  
5 hepatitis, nephritis, sepsis, sarcoidosis, psoriasis, eczema, urticaria, type I diabetes,  
6 asthma, conjunctivitis, otitis, allergic rhinitis, chronic obstructive pulmonary disease,  
7 sinusitis, dermatitis, inflammatory bowel disease, ulcerative colitis, Crohn's disease,  
8 Behcet's syndrome, gout, cancer, viral infections, bacterial infections, organ transplant  
9 conditions or skin transplant conditions.

1                    97. A method of treating a CXCR3-mediated condition or disease in a  
2 subject, said method comprising administering to a subject in need of such treatment a  
3 therapeutically effective amount of a compound having the formula (I):



4  
5                    6                    wherein

7                    X is a member selected from the group consisting of a bond, -C(O)-,  
8 -C(R<sup>5</sup>)(R<sup>6</sup>)-, -C(R<sup>5</sup>)=, -S(O)-, -S(O)<sub>2</sub>- and -N=;

9                    Z is a member selected from the group consisting of a bond, -N=, -O-, -S-,  
10 -N(R<sup>17</sup>)- and -C(R<sup>7</sup>)=, with the proviso that X and Z are not both a bond;

11                    L is a member selected from the group consisting of a bond, C(O)-(C<sub>1</sub>-  
12 C<sub>8</sub>)alkylene, (C<sub>1</sub>-C<sub>8</sub>)alkylene and (C<sub>2</sub>-C<sub>8</sub>)heteroalkylene;

13                    Q is a member selected from the group consisting of a bond, (C<sub>1</sub>-  
14 C<sub>8</sub>)alkylene, (C<sub>2</sub>-C<sub>8</sub>)heteroalkylene, -C(O)-, -OC(O)-, -N(R<sup>8</sup>)C(O)-, -CH<sub>2</sub>CO-, -CH<sub>2</sub>SO-  
15 and -CH<sub>2</sub>SO<sub>2</sub>-;

16                    optionally L and Q can be linked together to form a 5- or 6-membered  
17 heterocyclic group having from 1 to 3 heteroatoms;

18                    R<sup>1</sup> and R<sup>2</sup> are members independently selected from the group consisting

of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl and heteroaryl, or optionally are combined to form a 3 to 8-membered ring having from 0 to 2 heteroatoms as ring vertices;

optionally R<sup>2</sup> and L can be linked together to form a 5- or 6-membered heterocyclic group having from 1 to 4 heteroatoms;

R<sup>3</sup> is a member selected from the group consisting of hydroxy, (C<sub>1</sub>-C<sub>8</sub>)alkoxy, amino, (C<sub>1</sub>-C<sub>8</sub>)alkylamino, di(C<sub>1</sub>-C<sub>8</sub>)alkylamino, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, (C<sub>3</sub>-C<sub>9</sub>)heterocyclyl, (C<sub>1</sub>-C<sub>8</sub>)acylamino, amidino, guanidino, ureido, cyano, heteroaryl, -CONR<sup>9</sup>R<sup>10</sup> and -CO<sub>2</sub>R<sup>11</sup>;

R<sup>4</sup> is a member selected from the group consisting of (C<sub>1</sub>-C<sub>20</sub>)alkyl, (C<sub>2</sub>-C<sub>20</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>6</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>6</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>6</sub>)heteroalkyl;

R<sup>5</sup> and R<sup>6</sup> are each members independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl, or optionally R<sup>5</sup> and R<sup>6</sup> are combined to form a 3- to 7-membered ring;

R<sup>7</sup> and R<sup>8</sup> are each members independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl,

each R<sup>9</sup>, R<sup>10</sup> and R<sup>11</sup> is independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl;

Y<sup>1</sup> and Y<sup>2</sup> are each members independently selected from the group consisting of -C(R<sup>12</sup>)=, -N=, -O-, -S- and -N(R<sup>13</sup>)=;

Y<sup>3</sup> is a member selected from the group consisting of N and C wherein the carbon atom shares a double bond with either Z or Y<sup>4</sup>; and

Y<sup>4</sup> is a member selected from the group consisting of -N(R<sup>14</sup>)-, -C(R<sup>14</sup>)=, -N= and -N(R<sup>14</sup>)-C(R<sup>15</sup>)(R<sup>16</sup>)-, wherein

each R<sup>12</sup> is a member independently selected from the group consisting of H, halogen, hydroxy, amino, alkylamino, dialkylamino, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl, or optionally when Y<sup>1</sup> and Y<sup>2</sup> are both -C(R<sup>12</sup>)= the two R<sup>12</sup> groups can be combined to form a substituted or unsubstituted 5- to 6-membered cycloalkyl, heterocycloalkyl, aryl or heteroaryl ring; or optionally when Y<sup>1</sup> is -C(R<sup>12</sup>)= and X is -C(R<sup>5</sup>)= or -C(R<sup>5</sup>)(R<sup>6</sup>)-, R<sup>12</sup> and R<sup>5</sup> can be combined to form a substituted or unsubstituted 5- to 6-membered cycloalkyl, heterocycloalkyl, aryl or heteroaryl ring;

R<sup>13</sup> is a member selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl,

aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl;

R<sup>14</sup> is a member selected from the group consisting of (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl, aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl(C<sub>1</sub>-C<sub>8</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl and aryl;

R<sup>15</sup> and R<sup>16</sup> are each members independently selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl and (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl; and

R<sup>17</sup> is a member selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, heteroaryl, aryl, heteroaryl(C<sub>1</sub>-C<sub>6</sub>)alkyl, heteroaryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, aryl(C<sub>1</sub>-C<sub>8</sub>)alkyl and aryl(C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, or optionally when Y<sup>2</sup> is -C(R<sup>12</sup>)= or -N(R<sup>13</sup>)-, R<sup>17</sup> can be combined with R<sup>12</sup> or R<sup>13</sup> to form a substituted or unsubstituted 5- to 6-membered cycloalkyl, heterocycloalkyl, aryl or heteroaryl ring;

with the proviso that when the Y<sup>3</sup>-containing ring system is a quinazolinone or quinolinone ring system, and R<sup>4</sup>-Q- is substituted or unsubstituted (C<sub>5</sub>-C<sub>15</sub>)alkyl, then R<sup>3</sup>-L- is other than substituted or unsubstituted (C<sub>2</sub>-C<sub>8</sub>)alkylene or a substituted or unsubstituted (C<sub>2</sub>-C<sub>8</sub>)heteroalkylene attached to -NR'R'', wherein R' and R'' are independently selected from the group consisting of hydrogen and (C<sub>1</sub>-C<sub>8</sub>)alkyl, or optionally are combined with the nitrogen atom to which each is attached to form a 5-, 6- or 7-membered ring.

**98.** A method in accordance with Claim 97, wherein Y<sup>4</sup> is -N(R<sup>14</sup>)- wherein R<sup>14</sup> is selected from the group consisting of aryl and heteroaryl.

**99.** A method in accordance with Claim 97, wherein X is -C(O)-.

**100.** A method in accordance with Claim 97, wherein Z is -N=.

**101.** A method in accordance with Claim 97, wherein Y<sup>1</sup> and Y<sup>2</sup> are each -C(R<sup>12</sup>)=, wherein the two R<sup>12</sup> groups are combined to form a fused 6-membered aryl or heteroaryl ring.

**102.** A method in accordance with Claim 97, wherein X is -C(O)-; Z is -N=; Y<sup>3</sup> is C; and Y<sup>1</sup> and Y<sup>2</sup> are each -C(R<sup>12</sup>)= wherein the two R<sup>12</sup> groups are combined to form a fused 6-membered substituted or unsubstituted aryl or heteroaryl ring.

**103.** A method in accordance with Claim 97, wherein L is (C<sub>1</sub>-C<sub>8</sub>)alkylene.

1                   104. A method in accordance with Claim 97, wherein Q is  $-\text{C}(\text{O})-$ .

1                   105. A method in accordance with Claim 97, wherein  $\text{R}^4$  is selected  
2 from the group consisting of  $(\text{C}_5\text{-C}_{15})$ alkyl, substituted or unsubstituted phenyl and  
3 biphenyl.

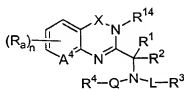
1                   106. A method in accordance with Claim 97, wherein  $\text{R}^3$  is selected  
2 from the group consisting of  $(\text{C}_1\text{-C}_8)$ alkoxy,  $(\text{C}_1\text{-C}_8)$ alkylamino,  $\text{di}(\text{C}_1\text{-C}_8)$ alkylamino,  
3  $(\text{C}_2\text{-C}_8)$ heteroalkyl,  $(\text{C}_3\text{-C}_9)$ heterocyclyl,  $(\text{C}_1\text{-C}_8)$ acylamino, cyano, heteroaryl,  
4  $-\text{CONR}^9\text{R}^{10}$  and  $-\text{CO}_2\text{R}^{11}$ .

1                   107. A method in accordance with Claim 97, wherein  $\text{R}^1$  and  $\text{R}^2$  are  
2 independently selected from the group consisting of H and  $(\text{C}_1\text{-C}_4)$ alkyl.

1                   108. A method in accordance with Claim 97, wherein  $\text{Y}^3$  is C and the  
2 carbon atom shares a double bond with Z.

1                   109. A method in accordance with Claim 97, wherein the  $\text{Y}^3$ -containing  
2 ring system is selected from the group consisting of quinoline, quinazoline, naphthalene,  
3 quinolinone, quinazolinone, triazolinone, pyrimidin-4-one, benzimidazole, thiazole,  
4 imidazole, pyridine, pyrazine and benzodiazepine.

1                   110. A method in accordance with Claim 97, wherein said compound  
2 has the formula (III):



III

5 wherein

6  $\text{A}^4$  is C or N;

7 X is  $-\text{CO}-$ ,  $-\text{CH}_2-$  or a bond;

8  $\text{R}^1$  and  $\text{R}^2$  are each members independently selected from the group consisting of  
9 H and  $(\text{C}_1\text{-C}_4)$ alkyl;

10  $\text{R}^{14}$  is a substituted or unsubstituted member selected from the group consisting of  
11 phenyl, pyridyl, thiazolyl, thienyl and pyrimidinyl;

12 Q is -CO-;  
 13 L is (C<sub>1</sub>-C<sub>8</sub>)alkylene;  
 14 the subscript n is an integer of from 0 to 4; and  
 15 each R<sub>a</sub> is independently selected from the group consisting of halogen, -OR',  
 16 -OC(O)R', -NR'R'', -SR', -R', -CN, -NO<sub>2</sub>, -CO<sub>2</sub>R', -CONR'R'', -C(O)R',  
 17 -OC(O)NR'R'', -NR''C(O)R', -NR''C(O)<sub>2</sub>R', -NR''-C(O)NR''R''',  
 18 -NH-C(NH<sub>2</sub>)=NH, -NR''C(NH<sub>2</sub>)=NH, -NH-C(NH<sub>2</sub>)=NR', -S(O)R', -  
 19 S(O)<sub>2</sub>R', -S(O)<sub>2</sub>NR'R'', -N<sub>3</sub>, -CH(Ph)<sub>2</sub>, perfluoro(C<sub>1</sub>-C<sub>4</sub>)alkoxy, and  
 20 perfluoro(C<sub>1</sub>-C<sub>4</sub>)alkyl, wherein R', R'' and R''' are each independently  
 21 selected from the group consisting of H, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl,  
 22 unsubstituted aryl, unsubstituted heteroaryl, (unsubstituted aryl)-(C<sub>1</sub>-  
 23 C<sub>4</sub>)alkyl, and (unsubstituted aryl)oxy-(C<sub>1</sub>-C<sub>4</sub>)alkyl.

1 111. A method in accordance with Claim 110, wherein X is -C(O)-.

1 112. A method in accordance with Claim 110, wherein X is -CH<sub>2</sub>-.

1 113. A method in accordance with Claim 110, wherein X is a bond.

1 114. A method in accordance with Claim 110, wherein R<sup>4</sup> is substituted  
 2 or unsubstituted benzyl, wherein said substituents are selected from the group consisting  
 3 of halogen, halo(C<sub>1</sub>-C<sub>4</sub>)alkyl, halo(C<sub>1</sub>-C<sub>4</sub>)alkoxy, cyano, nitro, and phenyl.

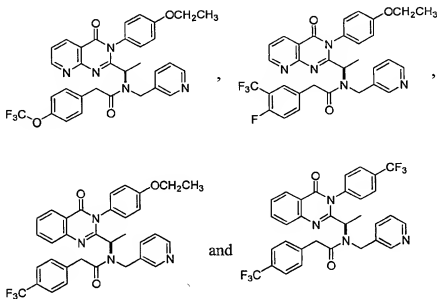
1 115. A method in accordance with Claim 110, wherein R<sup>14</sup> is selected  
 2 from the group consisting of substituted phenyl, substituted pyridyl, substituted thiazolyl  
 3 and substituted thienyl, wherein the substituents are selected from the group consisting of  
 4 cyano, halogen, (C<sub>1</sub>-C<sub>8</sub>)alkoxy, (C<sub>1</sub>-C<sub>8</sub>)alkyl, (C<sub>2</sub>-C<sub>8</sub>)heteroalkyl, CONH<sub>2</sub>,  
 5 methylenedioxy and ethylenedioxy.

1 116. A method in accordance with Claim 110, wherein R<sup>1</sup> is selected  
 2 from the group consisting of methyl, ethyl and propyl, and R<sup>2</sup> is hydrogen.

1 117. A method in accordance with Claim 110, wherein R<sup>1</sup> and R<sup>2</sup> are  
 2 each methyl.

1 118. A method in accordance with Claim 110, wherein R<sup>3</sup> is selected  
 2 from the group consisting of substituted or unsubstituted pyridyl and substituted or

1                   **121.**   The method of Claim 110, wherein said compound is selected from  
2   the group consisting of:



1                   122. A method in accordance with Claim 97, wherein said CXCR3-  
2 mediated condition is selected from the group consisting of neurodegenerative diseases,  
3 multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, atherosclerosis,  
4 encephalitis, meningitis, hepatitis, nephritis, sepsis, sarcoidosis, psoriasis, eczema,  
5 urticaria, type I diabetes, asthma, conjunctivitis, otitis, allergic rhinitis, chronic obstructive  
6 pulmonary disease, sinusitis, dermatitis, inflammatory bowel disease, ulcerative colitis,  
7 Crohn's disease, Behcet's syndrome, gout, cancer, viral infections, bacterial infections,  
8 organ transplant conditions and skin transplant conditions.

1                   123. The method of Claim 97, wherein said compound modulates  
2 CXCR3.

1                   124. A method in accordance with Claim 110, wherein said compound  
2 is administered in combination with a second therapeutic agent, wherein said second  
3 therapeutic agent is useful for treating neurodegenerative diseases, multiple sclerosis,  
4 systemic lupus erythematosus, rheumatoid arthritis, atherosclerosis, encephalitis,  
5 meningitis, hepatitis, nephritis, sepsis, sarcoidosis, psoriasis, eczema, urticaria, type I  
6 diabetes, asthma, conjunctivitis, otitis, allergic rhinitis, chronic obstructive pulmonary  
7 disease, sinusitis, dermatitis, inflammatory bowel disease, ulcerative colitis, Crohn's  
8 disease, Behcet's syndrome, gout, cancer, viral infections, bacterial infections, organ  
9 transplant conditions or skin transplant conditions.

1                   125. A method in accordance with Claim 124, wherein said organ  
2 transplant condition is a bone marrow transplant condition or a solid organ transplant  
3 condition.

1                   126. A method in accordance with Claim 125, wherein said solid organ  
2 transplant condition is a kidney transplant condition, a liver transplant condition, a lung  
3 transplant condition, a heart transplant condition or a pancreas transplant condition.

1                   127. A method in accordance with Claim 97, wherein said CXCR3-  
2 mediated condition is restenosis.

1                   128. A method in accordance with Claim 97, wherein said CXCR3-  
2 mediated condition is selected from the group consisting of multiple sclerosis, rheumatoid



3 arthritis and organ transplant conditions.

1                   **129.** A method in accordance with Claim 110, wherein said compound  
2 is used in conjunction with another therapeutic agent selected from the group consisting  
3 of Remicade®, Enbrel®, a COX-2 inhibitor, a glucocorticoid, an immunosuppressant,  
4 methotrexate, prednisolone, azathioprine, cyclophosphamide, tacrolimus, mycophenolate,  
5 hydroxychloroquine, sulfasalazine, cyclosporine A, D-penicillamine, a gold compound,  
6 an antilymphocyte or antithymocyte globulin, betaseron, avonex and copaxone.

1                   **130.** A method in accordance with Claim 110, wherein said CXCR3-  
2 mediated condition is an organ transplant condition and said compound is used alone or in  
3 combination with a second therapeutic agent selected from the group consisting of  
4 cyclosporine A, FK-506, rapamycin, mycophenolate, prednisolone, azathioprene,  
5 cyclophosphamide and an antilymphocyte globulin.

1                   **131.** A method in accordance with Claim 110, wherein said CXCR3-  
2 mediated condition is rheumatoid arthritis and said compound is used alone or in  
3 combination with a second therapeutic agent selected from the group consisting of  
4 methotrexate, sulfasalazine, hydroxychloroquine, cyclosporine A, D-penicillamine,  
5 Remicade®, Enbrel®, auranofin and aurothioglucose.

1                   **132.** A method in accordance with Claim 110, wherein said CXCR3-  
2 mediated condition is multiple sclerosis and said compound is used alone or in  
3 combination with a second therapeutic agent selected from the group consisting of  
4 betaseron, avonex, azathioprene, capoxone, prednisolone and cyclophosphamide.

1                   **133.** The method of Claim 110, wherein said subject is a human.

1                   **134.** A method for the modulation of CXCR3 function in a cell,  
2 comprising contacting said cell with a compound of Claim 1.

1                   **135.** A method for the modulation of CXCR3 function, comprising  
2 contacting a CXCR3 protein with a compound of Claim 1.

3